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A double wire screen, about three times the length of the roller, is placed above it, inclined towards it in an angle of about 25 degrees; at the upper end of this screen the hopper is fixed, in which is put a wire screen to take out the thickest of the rubbish, of straw and other matters mixed among the grain — Projections from the roller act against a part of the lower end of the screen prepared for the purpose; by which a motion is given to the screen, that shakes forward the malt or other matter; at the front of the hopper a small slider is fixed, to adjust the size of the aperture through which the grain passes to the screen; and the screen is enclosed in a sort of trough, with sides which rise above it; and from one side of its lower end, a spout projects, to clear off the rubbish that is separated from the grain.

The grooved roller may be turned by any power most convenient.

Observation.—This machine is evidently formed on a principle similar to that of common coffee mills. It can only reduce grain to a coarse powder, such as is required for malt, or for feeding cattle, but does not appear capable of grinding sufficiently fine to make flour.

Machine for cutting roots for cattle, articles for dyer's use, or for culinary purposes; invented by Mr. Thomas Newton, of Bridge-street, London.

Trans. Soc. Arts.

This machine is composed of a trough, curved into a circular form, and of five chopping blades united to one handle, one end of which is fastened to a point at the center of the circle, of which the curve of the trough forms a part, and the other end serves as a lever to press the blades downwards into the trough.

Each of the blades is the length of the trough's breadth, and somewhat deeper than the trough, and has two tenants rising from its back, which passing through corresponding mortices in a piece of wood fixed beneath the handle or lever, serve to keep them firmly united to it, and are farther secured by pins which pass through them transversely through holes in the parts of them that project beyond the wooden bed. An iron plate having slits made through it, to admit the blades to pass, and of the same length and breadth as the blades, is by a bar that projects from it, fastened to a hinge beneath the lever, so as to admit the blades to move up and down through the slits, at the same time that it accompanies them in the lateral motion to different parts of the trough, as the lever to which they are attached is moved round the pivot: The use of this plate is to clean the chopping blades from any part of the cut substance which sticks to them; two pieces rise from the tail of the plate at each side of them, which hold a pin that prevents the blades from coming quite through; and a spring is placed between the tail of the plate and the lever, which raises the latter up, and causes the chopping to be performed more speedily, as the hand has only to free down the lever, which the spring raises.

This machine is particularly well calculated for the chopping of sausage meat. Though its value in this latter respect may at first appear inconsiderable, yet the great demand in most towns for that article, and the many hands it requires to make the meat fit for use, will, on enquiry, shew that it is of consequence. Many of the sausage-makers employ four or five men constantly in this business, and frequently three or four hundred weight of

meat is cut up by one house in a day.

The advantages of this invention consists in saving labour, time, and waste of meat. There are in this machine five knives, which are let into an iron plate, which is screwed to the working bar.

The knives are fastened by bolts passed through them close under and above the plate.

The sliding plate is for the purpose of preventing the meat being scattered; and to this plate are added scrapers, which are screwed underneath, for the purpose of clearing the knives at every stroke.

The spring raises the knives, and enables any person to chop at least twenty-times as much meat in the same time as can be done by the common mode.

The length of the knives being equal to the breadth of the trough, no meat can possibly escape the knives, nor will the meat require so much turning as is usually wanted. If it should require turning, it is easily done by alternately pressing the knives at either end of the trough, sliding them towards the middle.

When the meat is sufficiently chopped, the bar to which the knives are fixed may be lifted entirely free from the sliding plate, by taking the pin out of the guide. Indeed, the whole of the moving apparatus may be turned in any direction as occasion may require.

The same machine is also applicable for cutting fat, suet, &c. previous to rendering them into tallow; likewise to chopping madder and other roots for calico-printers, or as used in their recent state for dyers; also for dividing potatoes, carrots, and other esculent roots for farmers in feeding cattle, and may be made at a moderate expense, is worked with ease by the hand, and, when occasion requires, is easily repaired.

An aquatic sledge, or unsubmersible boat.

M. Badir counsellor of mines, at Munich in Bavaria, has invented what he terms an aquatic sledge, constructed on such a principle that it may be impelled and guided on the water by the rider himself without any other aid. The first public experiment was made with this machine on the 20th of August last, before the royal family at Nymphenburgh, with complete success.—It consists of two hollow canoes, or pontoons, eight feet long, made of sheet copper, closed on all sides, joined to each other in a parallel direction, at the distance of six feet, by a light wooden frame. Thus joined they support a seat resembling an arm chair, in which the rider is seated, and impels and steers the sledge, by treading two large pedals before him. Each of those pedals is connected with a paddle, fixed vertically in the after part of the machine behind the seat, and in the interval between the two pontoons. In front of the seat stands a small table, and behind it is a leathern bag to hold any thing wanted. It is so contrived that it can be taken to pieces in a few minutes, packed in a box, and be put together again in a very short time. This vehicle is far safer than a common boat, the centre of gravity being constantly in the middle of a very broad base; a circumstance which renders upsetting impossible even in the heaviest gale.

It is evidently extremely well calculated for use in taking sketches of aquatic scenery, as also for the diversion of shooting water fowl, in which case the sportsman conceals himself behind a slight screen of branches, or rushes, so as to approach the birds unperceived.